

REMARKS/ARGUMENTS

With this Amendment, Applicant amends claims 3 and 4 and adds claim 15. No new matter is added. Therefore, claims 1-15 are all the claims currently pending in the application. In view of the foregoing amendments and the following remarks, Applicant requests reconsideration of the application and allowance of the claims.

I. Rejection of Claims 1-2, 6, 8, 9, 10, 12-14 Under 35 U.S.C. § 102(b)

Claims 1, 2, 6, 8, 9, 10, 12, 13 and 14 stand rejected under 35 U.S.C. § 102(b), as being allegedly anticipated by Tsunekawa et al. (EP 0777295 A2; hereinafter "Tsunekawa"). In rejecting claim 1, the Examiner suggests that the abstract, "[column] 3, line 37 – [column] 5, line 30" and FIGS. 1A, 1B and FIG. 3 of Tsunekawa teaches all of the features of claim 1. (See pg. 2 of the Office Action) Applicant respectfully disagrees for at least the following reasons.

First, Tsunekawa fails to teach or suggest at least an antenna comprising, *inter alia*, a first resonator element and a second resonator, "the first and second resonator elements arranged ... such that at a *first frequency* the first and second resonator elements co-operate to allow operation of the first and second resonator elements ... in a *first mode* ... "and at a *second frequency* the first and second resonator elements co-operate to allow operation ... in a *second mode* wherein the *direction of current flow in one resonator element is substantially the same as the direction of current flow in the other resonator element,*" as required by claim 1.

In contrast to claim 1, Tsunekawa merely discloses an antenna device that can resonate at frequencies, wherein a space between two radiating patches can be small even if the antenna resonates at very close frequencies so that the size of the antenna disclosed therein is compact and the gain of the antenna is not reduced. For instance, Tsunekawa describes that the antenna disclosed therein controls coupling between two radiating patches 1A and 1B even when the radiating patches 1A and 1B are disposed facing each other in close proximity. Col. 4, lines 26-29. According to Tsunekawa, each radiating patch 1A and 1B can be resonated at desired frequencies which may be close by adjusting lengths, (e.g., L₁, L₃, L₄, and L₅), of the radiating patches, and by adjusting a capacitance (e.g. C₀) of a control capacitance element 2 and

capacitances C_1 and C_2 of resonance control capacitance elements 4A and 4B. In this regard, Tsunekawa discusses that the antenna can be made relatively small since the space L_3 between two radiating patches 1A and 1B can be close and that the antenna achieves high gain. Col. 4, lines 30-49.

In view of the foregoing, Tsunekawa, at best merely discloses that “[t]he capacitance C_0 of the coupling control capacitor element 2 is adjusted so that the current coupled from one of the two radiating patches 1A and 1B to the other and the current supplied from the same one of the two radiating patches to the other via the coupling control capacitor element 2 are in opposite phase to each other.” Col. 3, lines 54-59 and Col. 4, lines 1-2 of Tsunekawa (emphasis added); See Col. 2, lines 38-44; See also abstract. Nowhere in Tsunekawa is there any teaching or suggestion relating to a first frequency in which the two radiating elements 1A and 1B operate in a first mode and a second frequency in which the two radiating elements 1A and 1B operate in a second mode in which the direction of current in the radiating elements 1A and 1B is substantially the same, as required by claim 1.

Second, as stated in the background of the invention section of Tsunekawa, Tsunekawa is directed to an antenna which overcomes a problem in a conventional antenna caused by having two patch elements in close proximity resulting in “mutual coupling between two radiating patches [becoming] large and the two radiating patches [being] regarded as a single electrically body, thus diminishing the effect of using two radiating patches.” Col. 1, lines 27-44. Tsunekawa attempts to overcome this problem by introducing the coupling control capacitance element 2 between the radiating elements 1A and 1B in order to allow the radiating elements 1A and 1B to remain in close proximity to one another to thereby minimize mutual coupling (i.e., field coupling). As such, Tsunekawa fails to teach or suggest at least an antenna comprising, *inter alia*, a first resonator element and a second resonator element, “the first and second resonator elements arranged to *allow field coupling* between the first and second resonator elements ...,” as claimed.

For at least the foregoing reasons, Tsunekawa does not teach or suggest each and every feature of claim 1. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 102(b) rejection of claim 1 and its dependent claims 2-14.

II. Rejection of Claims 3-4, 5 and 7 Under 35 U.S.C. § 103(a)

The Examiner rejected Claims 3, 4, 5 and 7 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tsunekawa in view of Sekine et al. (U.S. Patent No. 5,903,822; "hereinafter Sekine"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Tsunekawa is deficient vis-à-vis independent claim 1. Sekine does not compensate for the deficiencies of Tsunekawa. Accordingly, claims 3, 4, 5 and 7 are patentable at least by virtue of their dependency from claim 1. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejections of dependent claims 3, 4, 5 and 7.

III. Rejection of Claim 11 Under 35 U.S.C. § 103(a)

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsunekawa in view of Spall (WO 99/43043; hereinafter "Spall"). Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, Tsunekawa is deficient vis-à-vis independent claim 1. Spall does not compensate for the deficiencies of Tsunekawa. Accordingly, claim 11 is patentable at least by virtue of its dependency from claim 1. Applicant therefore respectfully requests the Examiner to reconsider and withdraw the § 103(a) rejection of dependent claim 11.

IV. New Claims

Applicant has added new claim 15 in order to more fully cover various aspects of Applicant's invention as disclosed in the specification. In addition to its dependency from claim 1, Applicant respectfully submits that claim 15 should be allowable because the cited reference does not teach or suggest the recitations of claim 15.

V. Conclusion


In view of the foregoing remarks, Applicant respectfully submits that all of the claims of the present application are in condition for allowance. It is respectfully requested that a Notice

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of Allowance be issued in due course. Examiner Ramakrishnaiah is encouraged to contact Applicant's undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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